TM 9-1005-212-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL
MACHINE GUN, CALIBER .30
BROWNING M1919A4, FLEXIBLE W/E
(1005–672–1643)
MACHINE GUN, CALIBER .30
BROWNING, M1919A6, W/E
(1005–611–6005)
MOUNT, TRIPOD, MACHINE GUN
CALIBER .30, M2, W/E
(1005–322–9718)

HEADQUARTERS, DEPARTMENT OF THE ARMY
APRIL 1969

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WARNING

DANGEROUS PROCEDURES

such as firing weapon with improper headspace, inspecting before clearing the weapon, or not having driving spring rod assembly securely locked in bolt group during disassembly/assembly could result in damage to parts and/or serious injury to personnel.

WARNING

DANGEROUS CONDITIONS

exists whenever the weapon fails to fire. Observe the instructions and time intervals pertaining to firing malfunctions to prevent damage to parts and/or serious injury to personnel.

TECHNICAL MANUAL
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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *24 April 1969*

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This manual is current as of 31 January 1969

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*This manual supersedes that portion of TM 9–1005–212–12P, 22 July 1964, including changes, as pertains to the operator/crew.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1–1. Scope

This manual contains instructions for the operation and maintenance of the Caliber .30 Machine Guns, M1919A4 and M1919A6, and the Tripod Mount, M2.

1–2. Forms and Records

a. General. DA forms and procedures used for equipment maintenance will be only those prescribed in TM 38–750, Army Equipment Record Procedures.

b. Reporting of Equipment Publication Improvements. Reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, Headquarters, U.S. Army Weapons Command, ATTN: AMSWE–SMM–P, Rock Island, Ill. 61201

Section II. DESCRIPTION AND DATA

1–3. Description

a. Machine Guns, M1919A4 and M1919A6. The Machine Guns, M1919A4 and M1919A6 (figs. 1–1 and 1–2) are air-cooled, belt-fed, recoil-operated, automatic weapons. Ammunition is fed into the machine gun from the left by means of a metallic link belt. Refer to figures 1–3 and 1–4 for the major groups and assemblies.

b. Tripod Mount, M2. The Tripod Mount, M2 (fig. 1–5), is a lightweight, portable, folding mount used for ground fire. It permits a high

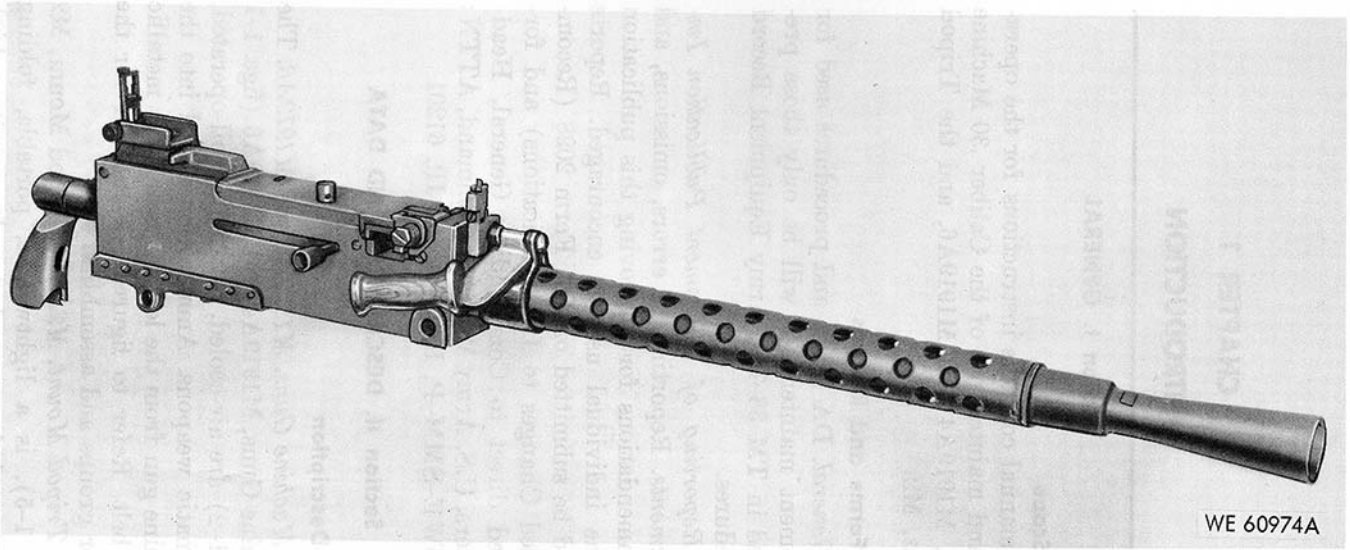

Figure 1–1. Caliber .30 Machine Gun, M1919A4—right front view.

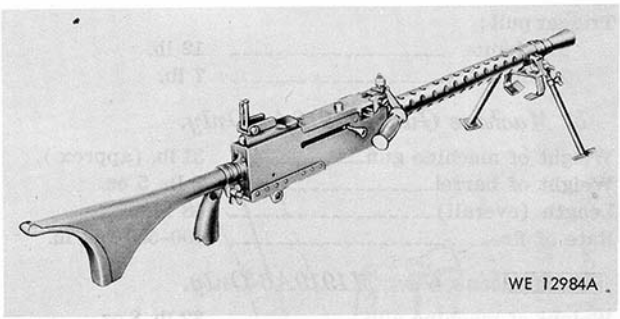

Figure 1–2. Caliber .30 Machine Gun, M1919A6—right rear view.

degree of accuracy and greater control of fire. It is used for mounting the Machine Gun, M1919A4, and can be used to mount the M1919A6. Refer to figure 1–6 for major groups and assemblies.

c. Differences in Models. The Machine Guns, M1919A4 and M1919A6, are basically the same, but there are several differences. The M1919A6 differs from the M1919A4 as follows:

(1) A bipod assembly is mounted on the front.

(2) The barrel is lighter.

(3) A metal shoulder stock is mounted on the back plate assembly.

(4) The rate of fire is faster.

1–4. Tabulated Data

a. Machine Guns, M1919A4 and M1919A6.

Length of barrel	24 in.
Rifling:	
Length	21.5 in.
Number of grooves	4.
Twist, right hand	One turn in 10 in.
Depth of grooves	0.0040 in.
Feed	Link-belt.
Cooling	Air.
Muzzle velocity (approx.):	
AP	2,770 fps.
Ball	2,800 fps.
Maximum range (30° elevation):	
AP	3,160 yd.
Ball	3,500 yd.
Maximum effective range (approx.)	1,100 meters.
Sight radius	14 in.

Trigger pull:	
Maximum	12 lb.
Minimum	7 lb.

b. Machine Gun, M1919A4 Only.

Weight of machine gun	31 lb. (approx.).
Weight of barrel	7 lb. 5 oz.
Length (overall)	48 in.
Rate of fire	400–550 rds/m.

c. Machine Gun, M1919A6 Only.

Weight of machine gun	32 lb. 8 oz. (approx.).
Weight of barrel	4 lb. 10 oz.
Length (overall)	53 in.
Rate of fire (cyclic)	600–675 rds/m.

d. Mount, Tripod, M2.

Weight	14 lb.
Length:	
Extended	32.5 in.
Folded	27 in.
Spread of rear legs	30 in.
Traversing range:	
W/o releasing elevating mechanism	450 mils left, 425 mils right.
Free	6400 mils.
Least increment	1 mil.
Traversing bar graduation	875 mil (approx.).
Elevating range:	
Mechanical	−200 to +265 mils.
Least increment	1 mil.
Elevating handwheel graduation	1 mil.

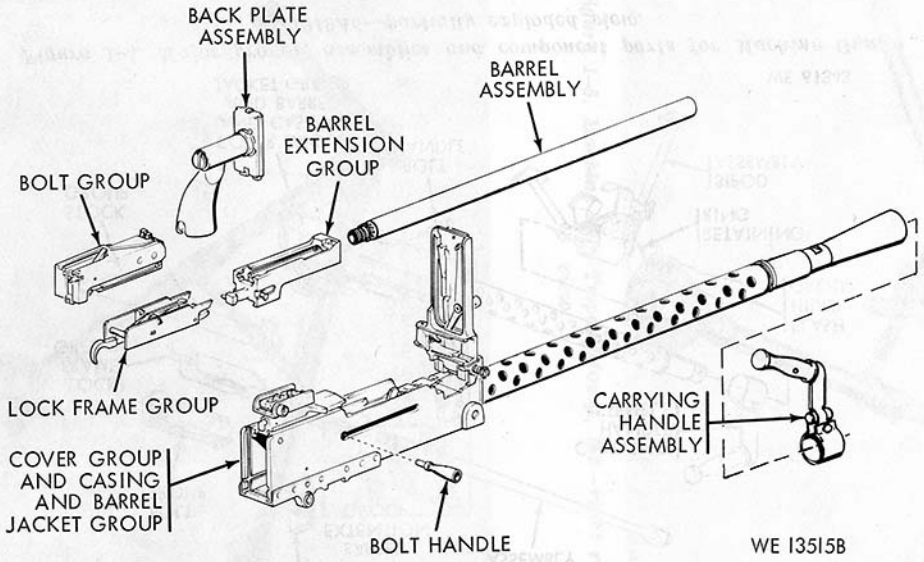

Figure 1–3. Major groups, assemblies and component parts for Machine Gun, M1919A4—partially exploded view.

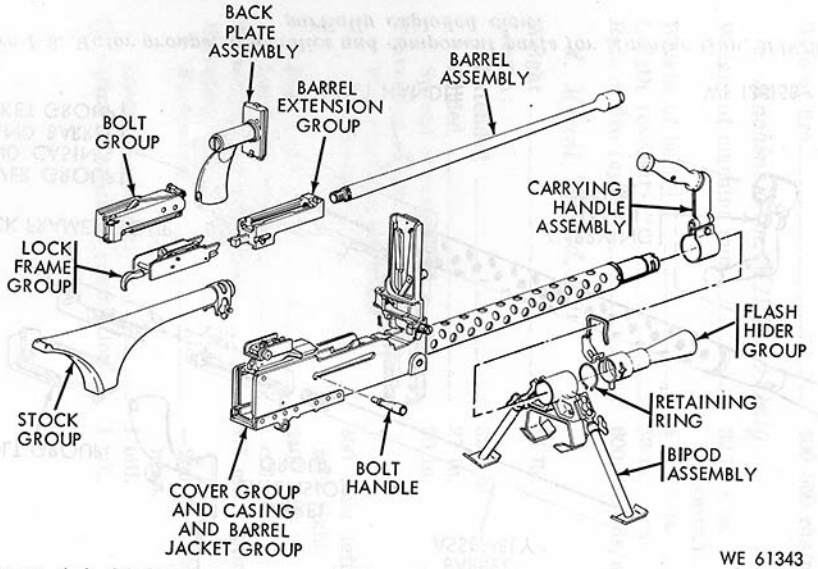

Figure 1–4. Major groups, assemblies and component parts for Machine Gun, M1919A6—partially exploded view.

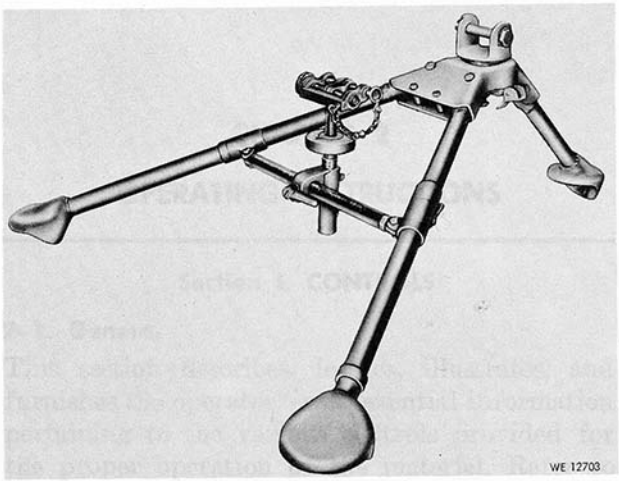

Figure 1–5. Machine Gun Tripod Mount, M2—right rear view.

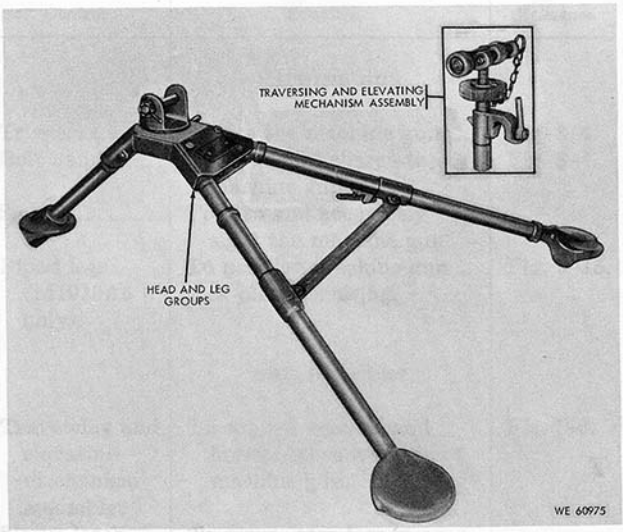

Figure 1–6. Major groups and assemblies for Machine Gun Tripod Mount, M2—partially exploded view.

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CHAPTER 2

OPERATING INSTRUCTIONS

Section I. CONTROLS

2–1. General

This section describes, locates, illustrates, and furnishes the operator/crew essential information pertaining to the various controls provided for the proper operation of the materiel. Refer to table 2–1 for the controls.

Table 2–1. Controls

Control	Function	Reference
	MACHINE GUN	
Trigger	To fire the machine gun	Fig. 3–4.
Bolt handle	To manually charge the machine gun.	Fig. 3–4.
Sights	To zero and accurately sight the machine gun.	
Bipod legs (M1919A6 only).	To position machine gun in place for firing.	Fig. 3–15.
	TRIPOD MOUNT	
Traversing and elevating mechanism assembly.	To control vertical and horizontal movement of machine gun.	Fig. 1–6.
Sleeve latch	To secure rear legs in open position.	
Pintle lock lever.	To secure pintle in tripod head.	
Traversing slide lock lever.	To control horizontal movement of machine gun.	

Section II. OPERATION UNDER USUAL CONDITIONS

2–2. Preparation for Firing

Refer to table 2–2.

Table 2–2. Preparation for Firing

Step	Procedure	Reference
	MACHINE GUN	
1	Perform "before firing" preventive maintenance checks and services.	Table 3–3.
2	Check and/or adjust headspace	Table 2–3.
	TRIPOD MOUNT	
3	Open tripod	
4	Install traversing and elevating mechanism assembly.	Figs. 1–6 and 2–1.
5	Install machine gun on mount	Fig. 2–1.

2–3. Checking and Adjusting Headspace

Refer to table 2–3.

Table 2–3. Adjusting Headspace

Step	Procedure
	Note. Adjust headspace every time barrel is assembled to machine gun for firing.
	***Warning.* Improper headspace can cause malfunctioning of machine gun and damage to parts and/or injury to personnel.**
1	Begin with fully assembled machine gun.
2	Pull bolt to rear approximately ¾ inch and screw barrel into barrel extension. (Use combination wrench in barrel notches.) Continue until barrel is fully screwed into barrel extension.
3	Release bolt (from approximately ¾ inch distance).
	Note. Barrel extension will not go fully forward into battery—*do not force.* Use only tension of driving spring when releasing the bolt.
4	Hold the bolt to the rear to release barrel tension and unscrew barrel *one* notch at a time. Check after each notch to see if barrel extension will go forward into battery.
5	When the barrel and barrel extension go fully forward (step 4 above) unscrew the barrel *two* additional notches. This will compensate for heat expansion when the machine gun is fired. The headspace is now correct.

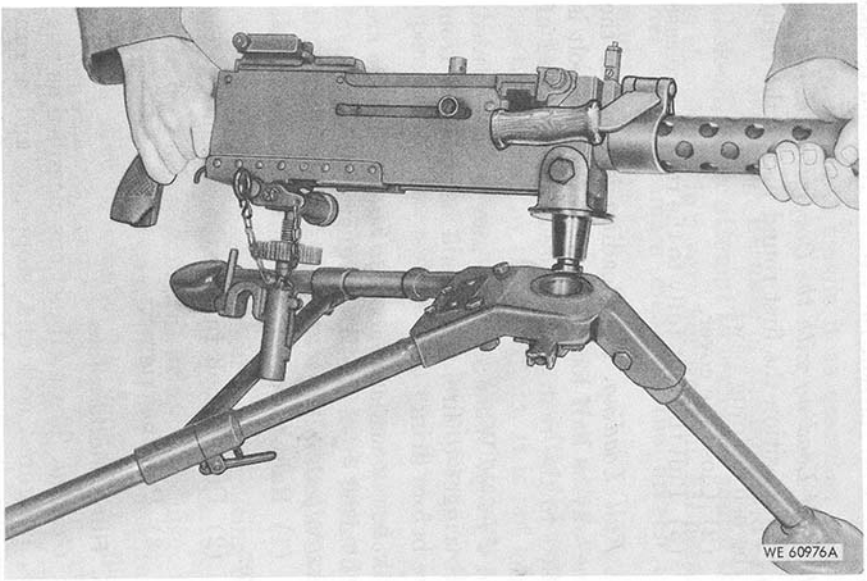

Figure 2–1. Removal/installation of machine gun from Tripod Mount, M2.

2–4. Loading, Firing, and Unloading

a. Half Loading with Cover Closed.

(1) Insert the double looped end of the belt into the feedway from the left.

(2) Push the first round of ammunition to the right of the belt holding pawl.

(3) Pull the bolt fully to the rear and release it.

b. Half Loading with the Cover Raised.

(1) Position the first round just to the right of the belt holding pawl.

(2) Close the cover.

(3) Pull the bolt fully to the rear and release it.

c. Full Loading. Full loading is done in the same way as half loading, except that the bolt is pulled to the rear and released twice instead of once.

d. Firing. When machine gun is fully loaded, pull trigger to fire. Oil should be removed from bore before firing.

Note. For immediate action in case of failure to fire, refer to table 2–4.

e. Unloading.

(1) Raise the cover, lift out the belt, and close cover.

(2) Pull the bolt fully to the rear and release it.

(3) Pull the trigger.

2–5. Firing Malfunctions

a. General. The malfunctions classified as misfires, hangfires, cook-offs, stoppages and a runaway gun are normally the result of improper weapon or ammunition maintenance and/or the use of unauthorized ammunition. The precautions described below are applicable to each specific type of malfunction rather than the occurrence of the malfunction in a specific weapon. All personnel concerned will know the nature of each malfunction described below, as well as the proper preventive and corrective procedures in order to avoid injury to personnel or damage to materiel.

b. Misfire, Hangfire, Cook-Off, and Stoppage.

(1) *Misfire.* A misfire is the failure of a chambered round to ignite when the firing mechanism is actuated. Such failure can be due to defective ammunition or faulty firing mechanism in the weapon. A misfire in itself is not dangerous, but because it cannot be immediately distinguished from a hangfire, handle it as described in table 2–4.

Warning. **Because of the possibility of a cook-off, never attempt to remove a round that is chambered in a very hot weapon. All personnel should remain clear of the breech and muzzle.**

(2) *Hangfire.* A hangfire is a delay in the igniting of the propellant charge after the primer has been struck by the firing pin. It is not easily distinguished from a misfire. Time intervals prescribed in table 2–4, must be observed before opening the cover after a failure to fire.

Warning. **During the prescribed time intervals, the weapon will be kept trained on the target and all personnel will stand clear of the barrel assembly.**

(3) *Cook-off.* A cook-off is the igniting of a round caused by the heat of a very hot barrel, and not caused by actuating the firing mechanism. Observe the same precautions as for a hangfire. A cook-off may be avoided by immediately firing ammunition loaded in a hot machine gun, or by unloading the weapon in the time specified in table 2–4.

(4) *Stoppage.* A stoppage is any interruption in the cycle of operation caused by faulty action of the machine gun or ammunition. Any stoppage must be handled as a misfire.

(5) *Runaway machine gun.*

(*a*) A runaway gun continues to fire after the trigger is released.

Caution. **Hold fire on target until feeding is stopped or ammunition is expended.**

(*b*) If only a few rounds are left in the belt, permit rounds to be fired. If a large number of rounds are left in belt, twist belt to stop firing.

2–6. Immediate Action in Case of Failure to Fire

Refer to table 2–4.

Table 2–4. Immediate Action in Case of Failure to Fire

Step	*Procedure*
	COOL WEAPON
	When a stoppage occurs (failure to fire) before completing a 150-round series (starting from a cool machine gun), perform the steps listed below, in given order:
	Note. Keep weapon trained on target.
1	Wait 5 seconds in the event of a hangfire.
2	Retract bolt, and return bolt to battery position.
3	Pull the trigger and attempt to fire.
4	If weapon still fails to fire, wait 5 seconds, open cover assembly, remove belted ammunition, retract bolt, and inspect to insure weapon is clear.
5	Check to determine cause of stoppage. Refer to table 3–4.
	HOT WEAPON
	When a stoppage occurs (failure to fire) after firing 150 rounds, either spasmodically or continuously within 2 minutes, perform the steps listed below in given order:
	***Caution:* Do not open cover assembly.**
1	Wait 5 seconds in the event of a hangfire.
2	Immediately retract bolt, and return handle forward.
	***Warning.* The danger of a cook-off exists when the barrel is hot. Immediate action must be applied within 10 seconds. Under NO circumstances will the cover be opened during this period.**
3	Attempt to fire.
4	If firing cannot be resumed, perform following procedures: a. Wait 5 minutes in event of hangfire. b. Open cover assembly, and remove belted ammunition. c. Retract the bolt and inspect to insure weapon is clear. d. Check to determine cause of stoppage. Refer to table 3–4.

Table 2–4. Immediate Action in Case of Failure to Fire—Continued

Step	*Procedure*
5	If the bolt cannot be retracted when applying immediate action, the bolt must remain locked in battery position (do NOT open cover assembly). *Allow weapon to cool at least 5 minutes* to guard against a cook-off. After waiting 5 minutes, perform the operations outlined for a cool weapon.
6	In the event a misfire occurs after an intentional cessation of firing, and the bolt is forward at time trigger is depressed, the bolt must remain locked in battery position (do NOT open cover assembly). *Allow weapon to cool at least 5 minutes* to guard against a cook-off. After waiting 5 minutes perform the operations outlined for a cool weapon.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

2–7. General

Special care is necessary whenever extremes in weather either exist or are expected. Proper care of weapons not only insures proper functioning, but also guards against wear and deterioration.

2–8. Operation in Extreme Cold

Note. Use general purpose lubricating oil (PL special) to lubricate all components of the weapon (except disks in back plate) and mount when temperature is expected to vary down to −30° F. temporarily. When temperature is expected to remain at 0° F. to −65° F. weapon will be lubricated with weapons lubricating oil (LAW) after cleaning.

a. Keep all moving parts free from moisture.

b. Do not oil parts excessively. Excess oil solidifies and causes sluggish operation or complete failure.

c. Hand operate machine gun frequently during periods of low temperature (below 0° F.) to insure proper functioning.

d. Before firing in temperature below 0° F., completely disassemble and clean all parts of the machine gun thoroughly and lubricate if situation permits.

e. After firing the machine gun, clean and lubricate as indicated in table 3–2.

f. Cover all equipment kept outside.

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g. When machine gun and mount are brought indoors, moisture is likely to condense on the cold surfaces. First allow equipment to reach room temperature, disassemble, wipe off all moisture, and lubricate.

2–9. Operation in Hot, Dry, Humid and Salty Climates

a. High temperatures and humidity tend to dissipate and contaminate lubricants. Therefore, *more frequent* servicing is necessary than for usual conditions. Inspect daily or more frequently if necessary and clean as necessary.

b. Make certain that unexposed parts as well as exposed surfaces are kept free of moisture, clean, and oiled.

c. After inspection and cleaning, oil with general purpose lubricating oil (PL special).

2–10. Operation in Dusty or Sandy Areas

a. Inspect daily and clean as necessary.

b. Wipe lubricants from exposed and noncritical operating surfaces. This prevents sand from sticking to the lubricant and forming an abrasive which can damage the machine gun.

c. Immediately after use in sandy terrain, clean the equipment with dry cleaning solvent (SD) and lubricate with general purpose lubricating oil (PL special). Then wipe dry as directed in *b* above.

d. After handling, wipe machine gun with a dry rag to remove perspiration which will cause rust.

e. Cover equipment as much as possible when operating in dusty or sandy areas.

2–11. Operation After Exposure to Water

a. When splashed or submerged, water will seep into the inner parts of the equipment and can cause rust to form.

b. If splashed or submerged, turn into organizational maintenance for complete disassembly, cleaning, and lubrication.

CHAPTER 3

MAINTENANCE INSTRUCTIONS

Section I. TOOLS, EQUIPMENT, AND REPAIR PARTS

3–1. Tools and Equipment

Tools and equipment issued with the machine gun and mount are listed in the basic issue items list (app. B).

3–2. Maintenance Repair Parts

Operator/crew maintenance repair parts for the machine gun and mount are listed and illustrated in the basic issue items list (app. B).

Section II. LUBRICATION INSTRUCTIONS

3–3. Cleaning and Lubrication Materials

Refer to table 3–1.

Table 3–1. Materials Required for Maintenance Functions

Federal stock No.	*Item*
8020–244–0153	BRUSH, ARTISTS: metal, ferrule, flat, chisel edges, 7/16 w, 1⅛ lg exposed bristle.
7920–205–2401	BRUSH, CLEANING, TOOL AND PARTS: rnd, 100 percent tampico fiber, 1⅛ at ferrule brush dia, 2⅞ clear of block brush lg.
	CLEANING COMPOUND, RIFLE BORE (CR):
6850–224–6656	2-oz. plastic bottle.
6850–224–6657	6-oz. can.
6850–281–1985	DRY CLEANING SOLVENT: (SD) (1-gal. can).
	LUBRICATING OIL, GENERAL PURPOSE (PL special):
9150–273–2389	4-oz. can.
9150–231–6689	1-qt can.
9150–292–9689	LUBRICATING OIL, WEAPONS: (LAW) for below zero operations (1-qt can).
7920–205–1711	RAG, WIPING: cotton (50-lb bale).
1005–288–3565	SWAB, SMALL ARMS CLEANING: cotton 2½ sq (1000 in pk).

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3–4. Detailed Lubrication Instructions

Refer to table 3–2.

Table 3–2. Detailed Lubrication Instructions

Step	*Procedure*
	USUAL CONDITIONS
	Machine Gun
	Note. The use of gasoline, kerosene, benzene (benzol) or high-pressure water, steam, or air for cleaning the weapon is prohibited.
1	Immediately after firing (or as soon as possible) thoroughly clean and lubricate the weapon to maintain reliability and combat effectiveness. Follow procedures listed below.
	Note. Do not dilute rifle bore cleaning compound (CR). Do not add antifreeze. Shake well before using.
2	Disassemble the machine gun into groups and assemblies. (For disassembly of flash hider from M1919A4, notify organizational maintenance.)
3	Clean bore and chamber with brush or swab saturated with CR until a clean swab can be run through the barrel without detecting any contamination. Wipe dry and lubricate.
4	Clean all metal surfaces that are subject to powder fouling with CR, wipe dry and lubricate.
	***Caution.* Do not dip back plate in any solution, clean with swab or rag saturated with CR or dry cleaning solvent (SD).**
	Note. Dry cleaning solvent (SD) is flammable and should not be used near an open flame. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves it may cause cracks in the skin and in some cases mild irritation or inflammation.
5	Clean all other surfaces not covered in steps 3 and 4 above with SD or CR, wipe dry and lubricate.
6	Inspect before assembling the bolt, bolt locking area and other areas where firing residue has deposited to insure proper cleaning and lubrication.
7	Inspect each component before being assembled (para 3–9) to insure the lubricant or preservative has been applied.
8	Use general prupose lubricating oil (PL special) to lubricate all components of the weapon (except disks in back plate) and mount when temperature is expected to vary down to −30° F. temporarily. When temperature is expected to remain at 0° F. to −65° F. weapon will be lubricated with weapons lubricating oil (LAW) after cleaning.
9	Remove oil from barrel bore before firing.

Table 3–2. Detailed Lubrication Instructions—Continued

Tripod Mount

1 Disassemble mount into major groups and assemblies (fig. 1–6).
2 Clean with SD. Refer to note in step 3 above.

Note. The traversing and elevating mechanism assembly will be cleaned with a dry cloth only.

3 Wipe dry and oil moving surfaces with PL special.
4 Assemble the major groups and assemblies (fig. 1–6).

UNUSUAL CONDITIONS

Machine Gun and Mount

1 Reduce lubrication intervals to daily if inspection indicates rust or corrosion.
2 Changing grade of lubricants:
   a. Lubricants are prescribed in accordance with temperature ranges: above −30 (PL special) and below zero (LAW).
   b. When to change grade of lubricants is determined by maintaining a close check on the operation of the weapon during the approach of change over periods in accordance with weather forecast data. Use PL special to lubricate all components of the weapon (except disks in back plate) and mount when temperature is expected to vary down to −30°F. temporarily. When temperature is expected to remain at 0°F. to −65°F. weapon will be lubricated with LAW after cleaning.
3 Extreme cold weather lubrication is contained in paragraph 2–8.

Note. Make certain all parts are free from condensation, dry and clean before lubricating.

4 Extreme hot weather or humid salt-air conditions require more frequent servicing since these conditions tend to dissipate the lubricants (para 2–9).
5 Lubricated surfaces are to be inspected and cleaned of fouled lubricants under sandy or dusty conditions (para 2–10).
6 As soon as possible after exposure to water, drain, wipe dry, clean and lubricate (para 2–11).

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3–5. General

a. Purpose. Preventive maintenance has a two-fold purpose.

(1) To insure that the machine gun and mount are ready for operation at all times.

(2) To permit discovery and correction of defects before they result in serious damage, failure, or even injury to personnel.

b. Specific Procedures. These procedures are listed in table 3–3. The item numbers indicate the sequence of the *minimum* inspection requirements.

Table 3–3. Preventive Maintenance Checks and Services

Item number	Interval operator daily			Item to be inspected	Procedure	Reference
	B [1]	D [1]	A [1]			
1	X	----	----	Machine gun	Make certain machine gun is properly cleaned and lubricated, and functions freely.	Table 3–2.
					Actuate controls	Table 2–1.
2	X	----	----	Barrel assemblies	Make certain that bore and chamber are dry and free of obstructions.	

3	X	----	----	Rear sight assembly---	Make certain that rear sight assembly is clean, lightly oiled and properly adjusted.
4	X	----	----	Headspace----------	Check and/or adjust headspace as necessary---------- Table 2–3.
5	X	----	----	Tripod mount----------	Make certain mount is properly cleaned and lubricated-------- Table 3–2.
6	X	----	----	Traversing elevating mechanism assembly.	Make certain sleeve is secured to the traversing bar assembly when sleeve latch is in locked position. Traversing and elevating handwheels must function properly. Fig. 1–6.
7	X	----	----	Head and leg groups---	Make certain mount is properly opened and secure----------
8	----	X	----	Machine gun----------	Note any defects during operation and correct immediately after operation. ***Caution.*** **Stop operation immediately when any defect is noted that would damage equipment if operation were continued.**
9	----	----	X	Machine gun and spare barrel assembly.	Field strip, clean and lubricate. Inspect for damaged parts, giving special attention to moving parts. Assemble machine gun and actuate manually to insure proper functioning. Para 3–9 and table 3–2.
10	----	----	X	Tripod mount----------	Clean and lubricate---------- Table 3–2.

[1] B—Before operation. D—During operation. A—After operation.

Section IV. TROUBLESHOOTING

3–6. Troubleshooting Procedures for Machine Gun

Refer to table 3–4.

Table 3–4. Troubleshooting

Malfunction	Probable cause	Corrective action
		Note. For malfunctions encountered but not listed, or if corrective action does not remedy condition, notify organizational maintenance.
Failure to feed.	Defective ammunition belt.	Remove damaged link or reposition rounds.
	Defective ammunition (short round).	Remove faulty round.
	Headspace too tight.	Adjust headspace (table 2–3).
Failure to chamber.	Obstruction in barrel assembly, chamber, or T-slot.	Remove obstruction; clean and lubricate as required.
	Damaged round	Remove round.
Failure to lock.	Headspace too tight.	Adjust headspace (table 2–3).
Failure to fire.	Defective ammunition.	Remove round.
Failure to unlock.	Defective ammunition (short recoil).	Replace.
Failure to extract.	Defective ammunition.	Remove round.
	Ruptured cartridge case.	Remove case (fig. 3–1).
	Headspace too loose, or independent movement between the bolt and barrel and barrel extension.	Adjust headspace (table 2–3).
	Dirty chamber	Clean chamber.
	Defective barrel assembly (pitted chamber).	Replace barrel assembly.

Table 3–4. Troubleshooting—Continued

Malfunction	Probable cause	Corrective action
Failure to eject.	Defective ammunition (short recoil).	Clear and reload.
Sluggish operation.	Excessive friction	Clean and lubricate.
	Burred parts	Turn into organizational maintenance.
	Incorrect headspace.	Adjust headspace (table 2–3).
Runaway machine gun.	Defective trigger mechanism, sear notch or firing pin shoulder.	Turn into organizational maintenance.

3–7. Troubleshooting Procedures for Tripod Mount

When the mount does not traverse or elevate properly, or when the machine gun cannot be properly secured to the mount, notify organizational maintenance.

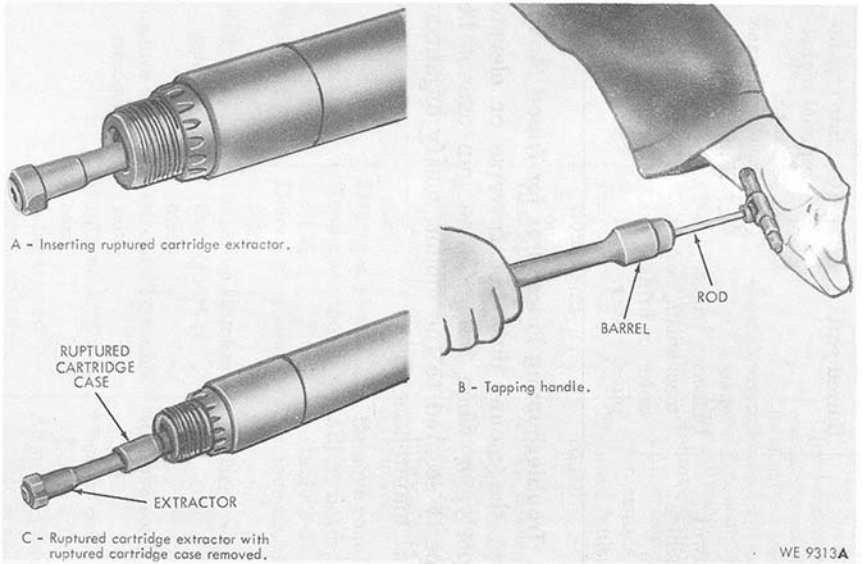


Figure 3–1. Removing ruptured cartridge case.

Section V. MAINTENANCE OF MACHINE GUNS, M1919A4 AND M1919A6

3–8. Removal/Installation

Refer to figure 2–1 for removal/installation of machine gun from mount.

3–9. Disassembly/Assembly

Note. Figures 3–2, 3–14, and 3–15 pertain to the M1919A6 only.

a. Disassembly/Assembly of M1919A4. Refer to figures 3–3 through 3–13 and 3–16.

b. Disassembly/Assembly of M1919A6. Refer to figures 3–2 through 3–16.

Note. White arrows shown on illustrations indicate disassembly; black arrows indicate assembly.

3–10. Cleaning, Inspection and Repair

a. Cleaning. Refer to table 3–2.

b. Inspection. Refer to table 3–5.

c. Repair. Replace barrel assembly (3, fig. B–1 and 2, B–2) if damaged or unserviceable. Evacuate machine gun to organizational maintenance for further repair.

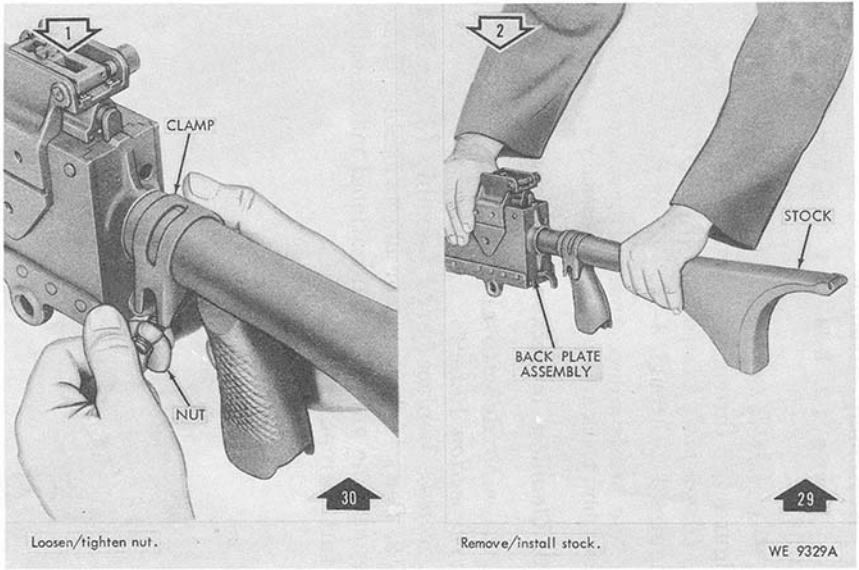


Figure 3–2. Disassembly/assembly of machine gun (M1919A6 only). (1 of 15)

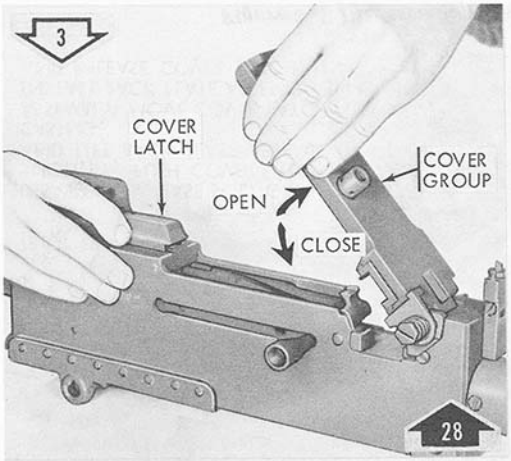

3
COVER LATCH
COVER GROUP
OPEN
CLOSE
28
DISASSEMBLY: RETRACT COVER LATCH TO OPEN COVER GROUP.
ASSEMBLY: MAKE CERTAIN COVER IS SECURELY LATCHED.
4
WARNING: DRIVING SPRING ROD ASSEMBLY MUST BE SECURELY LOCKED IN BOLT GROUP TO PREVENT INJURY TO PERSONNEL.
ROD ASSEMBLY
BACK PLATE ASSEMBLY
27
DISASSEMBLY: RETRACT BOLT GROUP. PUSH IN DRIVING SPRING ROD ASSEMBLY AND TURN CLOCKWISE 1/4 TURN.
ASSEMBLY: RETRACT BOLT GROUP. PUSH IN DRIVING SPRING ROD ASSEMBLY AND TURN COUNTERCLOCKWISE 1/4 TURN.
WE 60981

Figure 3–3. Disassembly/assembly of machine gun. (2 of 15)

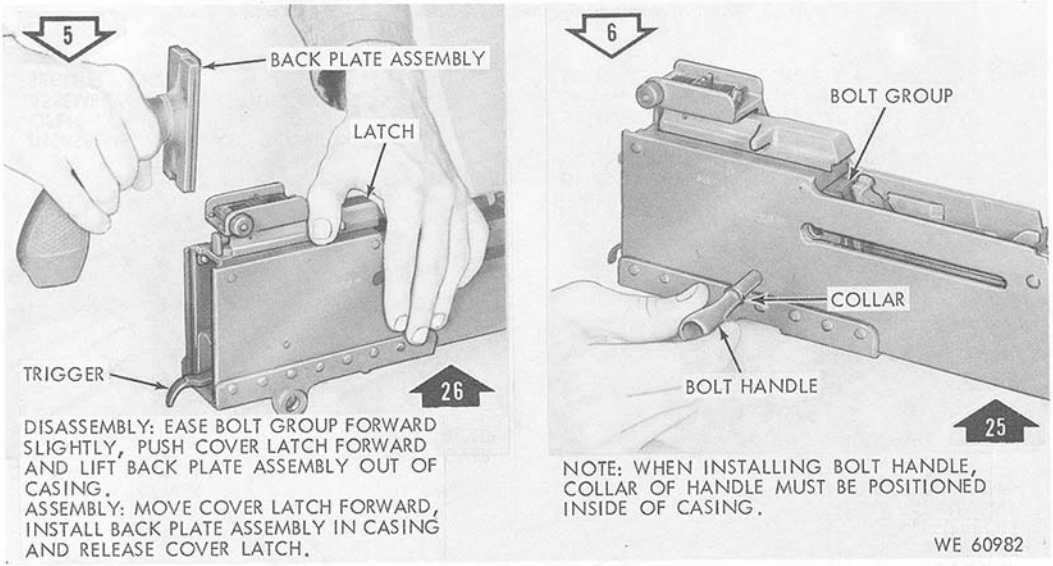

5
BACK PLATE ASSEMBLY
LATCH
TRIGGER
26
DISASSEMBLY: EASE BOLT GROUP FORWARD SLIGHTLY, PUSH COVER LATCH FORWARD AND LIFT BACK PLATE ASSEMBLY OUT OF CASING.
ASSEMBLY: MOVE COVER LATCH FORWARD, INSTALL BACK PLATE ASSEMBLY IN CASING AND RELEASE COVER LATCH.
6
BOLT GROUP
COLLAR
BOLT HANDLE
25
NOTE: WHEN INSTALLING BOLT HANDLE, COLLAR OF HANDLE MUST BE POSITIONED INSIDE OF CASING.
WE 60982

Figure 3–4. Disassembly/assembly of machine gun. (3 of 15)

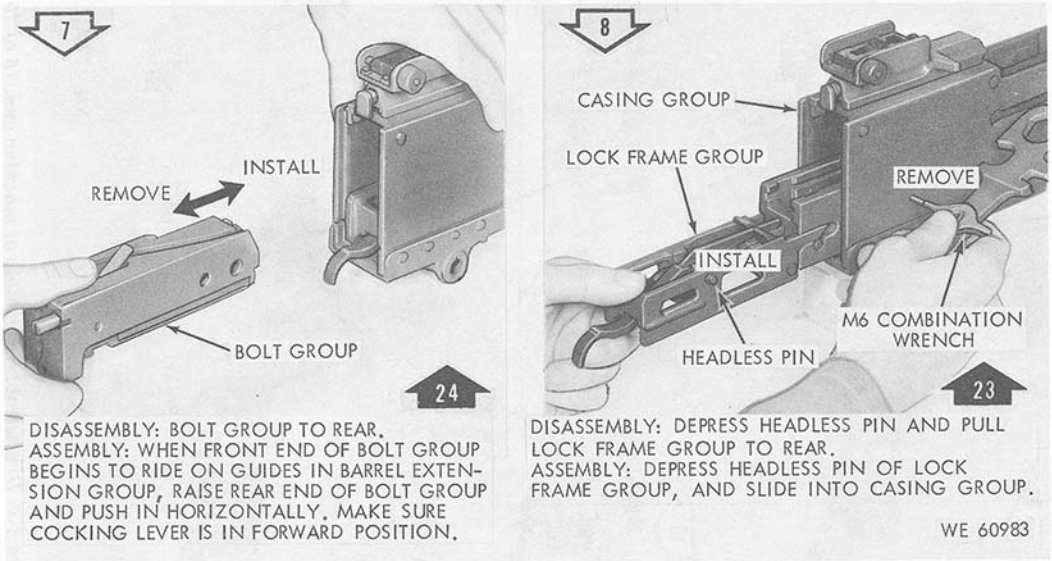

7
INSTALL
REMOVE
BOLT GROUP
24
DISASSEMBLY: BOLT GROUP TO REAR.
ASSEMBLY: WHEN FRONT END OF BOLT GROUP BEGINS TO RIDE ON GUIDES IN BARREL EXTENSION GROUP, RAISE REAR END OF BOLT GROUP AND PUSH IN HORIZONTALLY. MAKE SURE COCKING LEVER IS IN FORWARD POSITION.
8
CASING GROUP
LOCK FRAME GROUP
REMOVE
INSTALL
M6 COMBINATION WRENCH
HEADLESS PIN
23
DISASSEMBLY: DEPRESS HEADLESS PIN AND PULL LOCK FRAME GROUP TO REAR.
ASSEMBLY: DEPRESS HEADLESS PIN OF LOCK FRAME GROUP, AND SLIDE INTO CASING GROUP.
WE 60983

Figure 3–5. Disassembly/assembly of machine gun. (4 of 15)

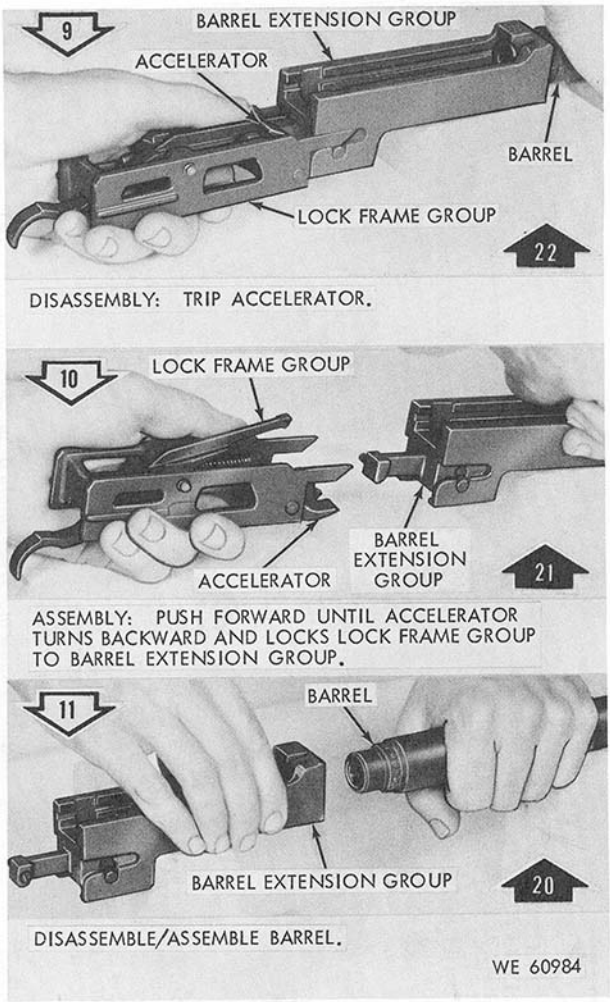
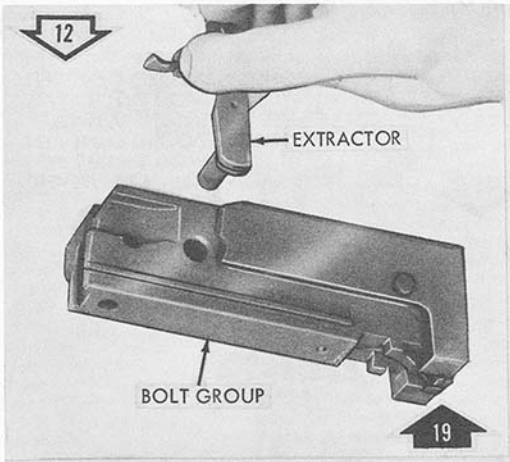


Figure 3–6. Disassembly/assembly of machine gun. (5 of 15)



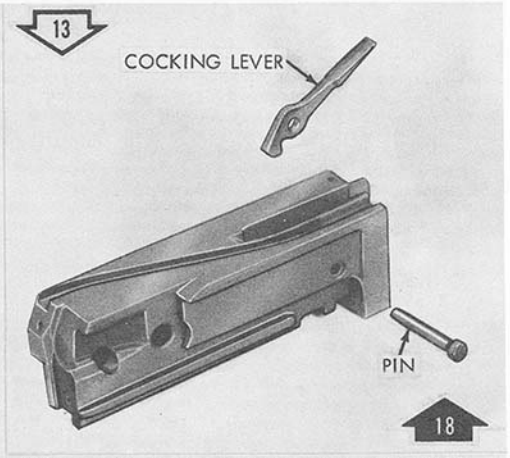


Figure 3–7. Disassembly/assembly of machine gun. (6 of 15)

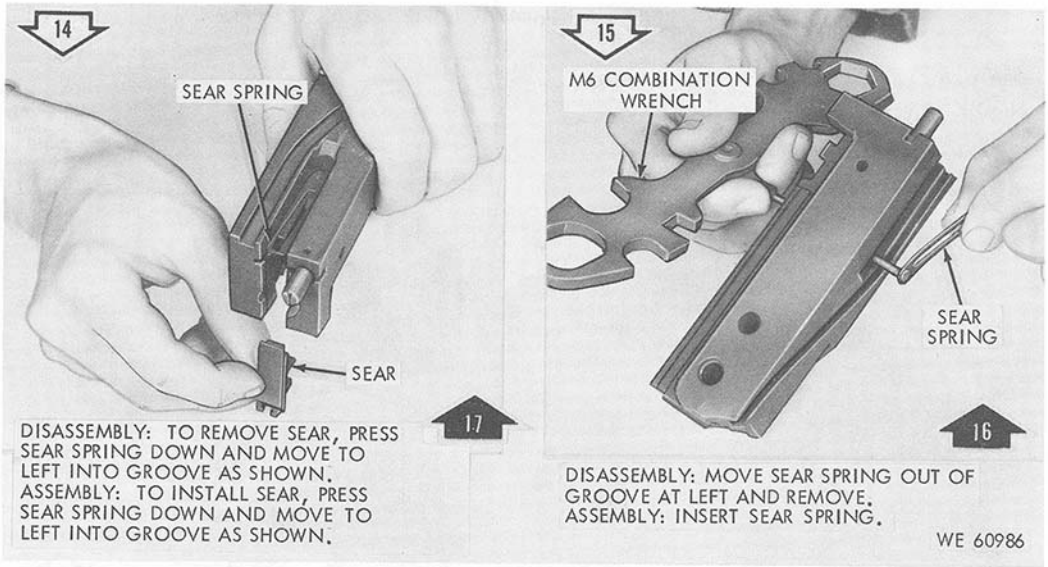
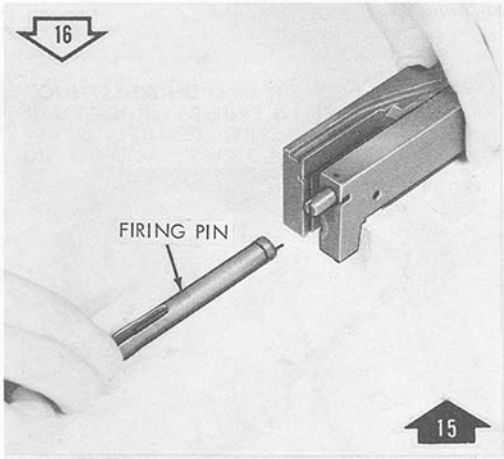
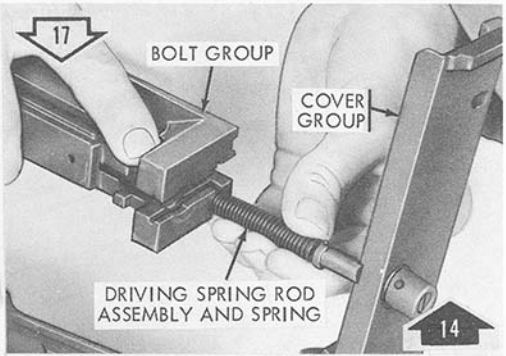

14
SEAR SPRING
SEAR
17
DISASSEMBLY: TO REMOVE SEAR, PRESS SEAR SPRING DOWN AND MOVE TO LEFT INTO GROOVE AS SHOWN.
ASSEMBLY: TO INSTALL SEAR, PRESS SEAR SPRING DOWN AND MOVE TO LEFT INTO GROOVE AS SHOWN.
15
M6 COMBINATION WRENCH
SEAR SPRING
16
DISASSEMBLY: MOVE SEAR SPRING OUT OF GROOVE AT LEFT AND REMOVE.
ASSEMBLY: INSERT SEAR SPRING.
WE 60986

Figure 3–8. Disassembly/assembly of machine gun. (7 of 15)



DISASSEMBLY: REMOVE FIRING PIN.
ASSEMBLY: WITH FLAT EDGE DOWN, INSERT FIRING PIN.



DISASSEMBLY: WITH DRIVING SPRING ROD ASSEMBLY AGAINST COVER GROUP AS SHOWN, DEPRESS AND TURN BOLT GROUP COUNTER-CLOCKWISE 1/4 TURN.
CAUTION: BE CAREFUL TO HOLD BOLT GROUP AND SPRING FIRMLY TO PREVENT SPRING AND ROD ASSEMBLY FROM FLYING.
ASSEMBLY: COMPRESS SPRING AND TURN CLOCKWISE 1/4 TURN.

WE 60987

Figure 3–9. Disassembly/assembly of machine gun. (8 of 15)

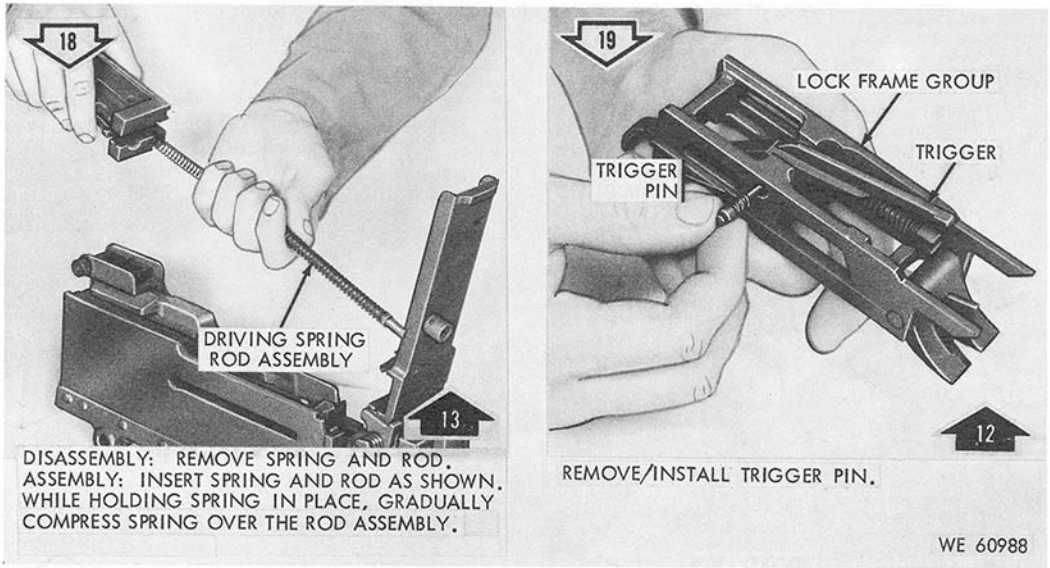


Figure 3–10. Disassembly/assembly of machine gun. (9 of 15)

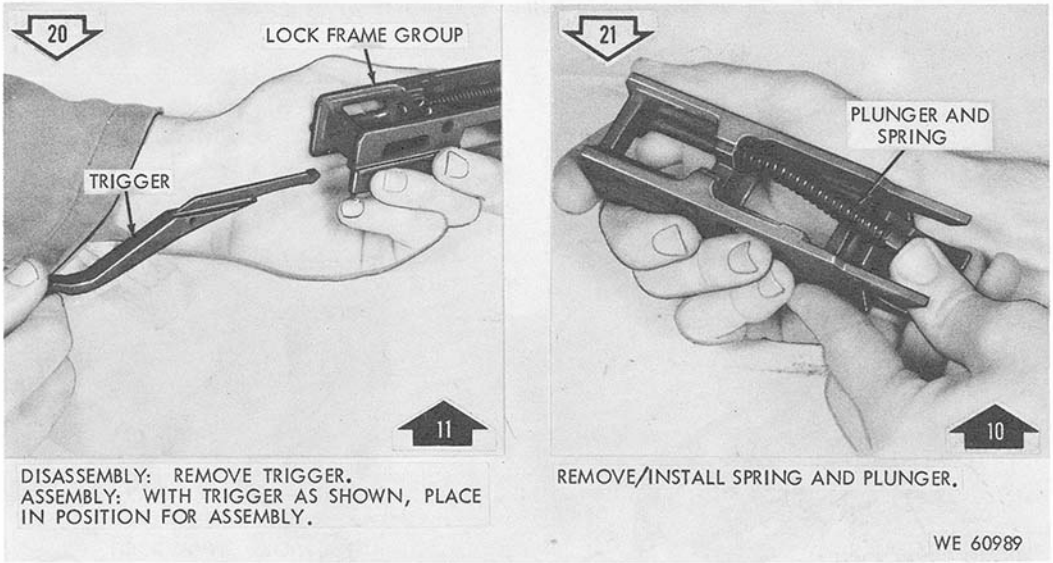


Figure 3–11. Disassembly/assembly of machine gun. (10 of 15)

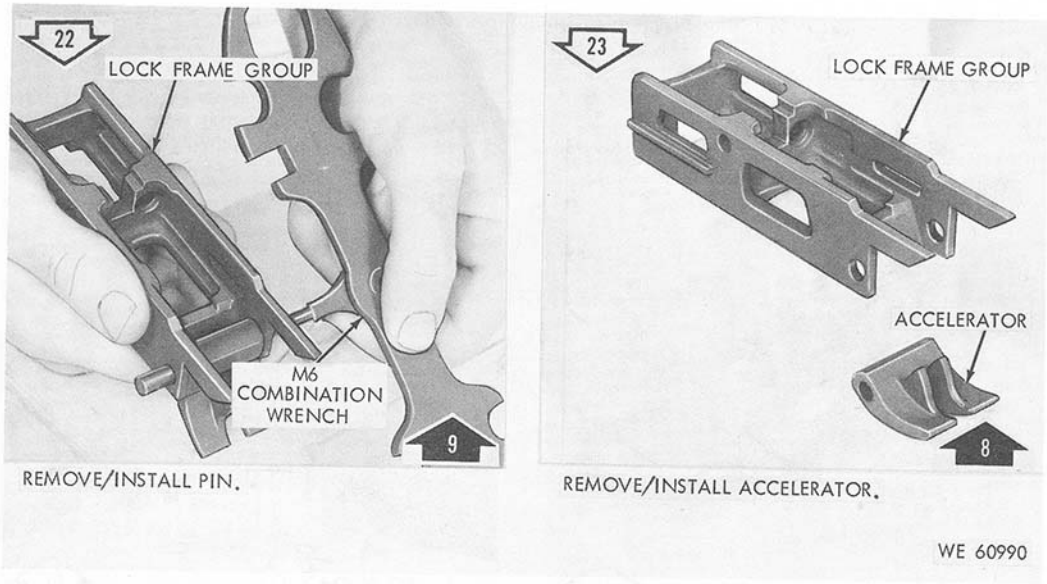


Figure 3–12. Disassembly/assembly of machine gun. (11 of 15)

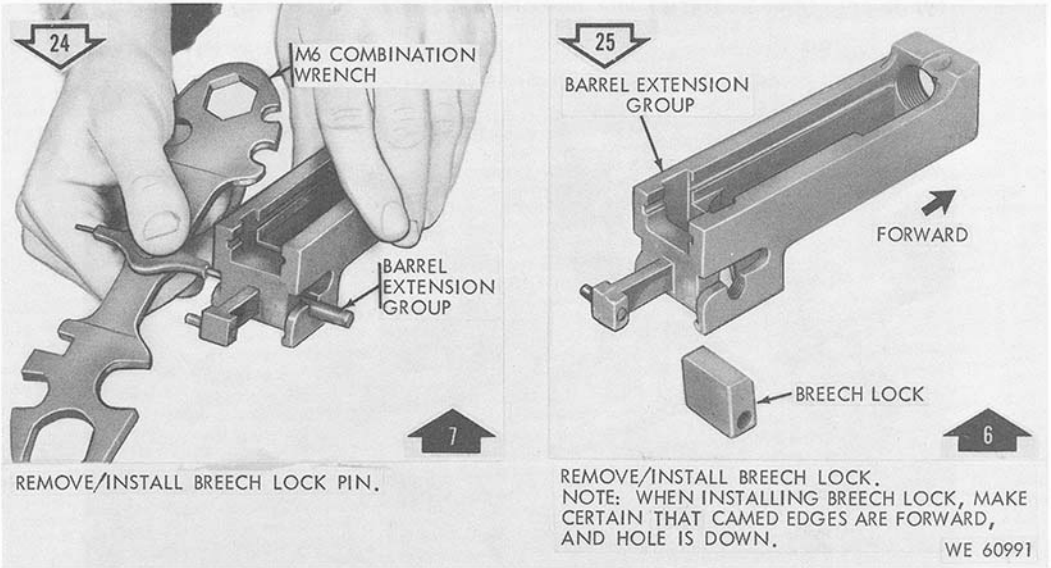


Figure 3–13. Disassembly/assembly of machine gun. (12 of 15)

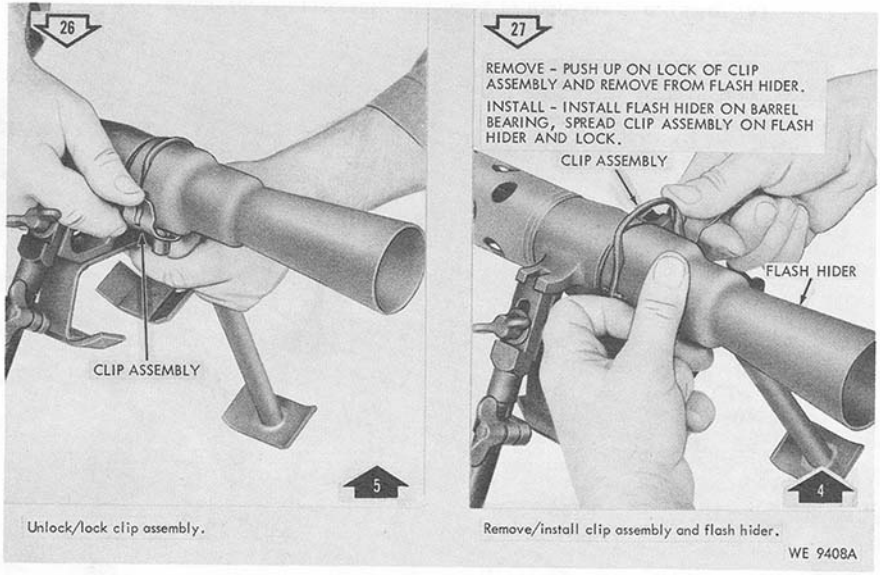

26
CLIP ASSEMBLY
5
Unlock/lock clip assembly.
27
REMOVE - PUSH UP ON LOCK OF CLIP ASSEMBLY AND REMOVE FROM FLASH HIDER.
INSTALL - INSTALL FLASH HIDER ON BARREL BEARING, SPREAD CLIP ASSEMBLY ON FLASH HIDER AND LOCK.
CLIP ASSEMBLY
FLASH HIDER
4
Remove/install clip assembly and flash hider.
WE 9408A

Figure 3–14. Disassembly/assembly of machine gun (M1919A6 only). (13 of 15)

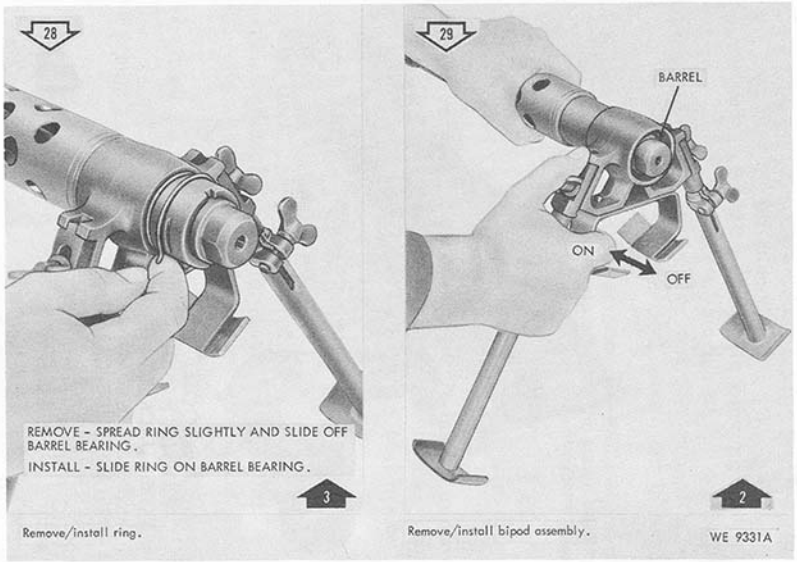


Figure 3–15. Disassembly/assembly of machine gun (M1919A6 only). (14 of 15)

30
CARRYING HANDLE ASSEMBLY.
REMOVE/LOOSEN NUT AND SLIDE CARRYING HANDLE ASSEMBLY OFF BARREL JACKET.
INSTALL/SLIDE CARRYING HANDLE ASSEMBLY OVER BARREL JACKET. TIGHTEN NUT.
1
WE 9328A

Figure 3–16. Disassembly/assembly of machine gun (15 of 15)

Table 3–5. Inspection Procedures for Machine Gun

Item	*Inspection procedures*
	Warning. **Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger until the weapon has been cleared. Inspect the chamber to insure that it is empty, and check to see that no ammunition is in position to be introduced.**
Machine gun	Insure proper functioning and freedom of movement.
Barrel assemblies	Inspect for rust, foreign matter, cracks, damage or rings in bore.
	Note. A gap between the Stellite liner and tube is allowed at manufacture to permit heat expansion. This gap or ring does not reflect a ringed or bulged bore.
	Inspect chamber for damage or foreign matter.
Front and rear sights.	Actuate controls to insure proper functioning. Check to insure that sights are secure. Check scales for legibility.
Bipod assembly	Check for proper function. Must be secure.
Shoulder stock	Check for secure installation.
Carrying handle	Check for secure installation.
Flash hider	Check for secure installation. Inspect for carbon.
Cover latch	Check for positive locking retention of cover group.
Bolt group	Inspect for burs or sharp edges. Inspect for deformed driving spring rod or spring. Inspect cocking lever for damaged camming ends. Inspect firing pin for cracks, or damage. Inspect cartridge extractor for damage.
Lock frame group	Inspect accelerator for damage. Inspect pin assembly for damaged spring.
Barrel extension group.	Inspect pin assembly for damaged spring. Inspect breech lock for damage. Inspect for damaged locking spring.
Casing group	Inspect working surfaces. Cams and surfaces must be smooth and free of any obstructions or defects.

Section VI. MAINTENANCE OF TRIPOD MOUNT, M2

3–11. Disassembly/Assembly

Refer to figure 1–6.

Note. Do not disassemble mount further than indicated in above figure.

3–12. Cleaning, Inspection, and Repair

a. Cleaning. Refer to table 3–2.

b. Inspection. Refer to table 3–6.

c. Repair. Return mount to organizational maintenance for any repairs.

Table 3–6. Inspection Procedures for Mount

Item	*Inspection procedures*
Traversing and elevating mechanism assembly.	Check scale for legibility. Actuate to insure freedom of movement. Check assembly to insure it is secure when locked.
Traversing bar and sleeve.	Check scale for legibility. Check sleeve for freedom of movement when unlocked, and that it is secure when locked.
Pintle	Check to insure freedom of movement, and that it is secure when locked.
Head and leg groups.	Check to insure stability of mount when opened. Check to assure legs lock securely in place. Check legs for distortion.

CHAPTER 4
AMMUNITION

4–1. Types

The types of ammunition for the caliber .30 machine guns are ball, armor piercing, incendiary, armor-piercing incendiary, tracer, dummy and blank.

4–2. Firing Data

Firing data for caliber .30 ammunition are published in FT 0.30–A–4 and FT 0.30–J–1.

APPENDIX A

REFERENCES

A–1. Publication Indexes

Consult the following publication indexes frequently for the latest changes or revisions of references and for new publications relating to materiel covered in this manual.

Index of Administrative Publications	DA Pam 310–1
Index of Army Films, Transparencies, GTA Charts, and Recordings	DA Pam 108–1
Index of Blank Forms	DA Pam 310–2
Index of Doctrinal, Training, and Organizational Publications	DA Pam 310–3
Index of Supply Catalogs and Supply Manuals (excluding types 7, 8, and and 9)	DA Pam 310–6
Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9) Supply Bulletins, and Lubrication Orders	DA Pam 310–4
U.S. Army Equipment Index of Modification Work Orders	DA Pam 310–7

A–2. Forms

DA Form 2028, Recommended Changes to DA Publications.

A–3. Other Publications

The following explanatory publications pertain to this material.

a. General.

Accident Reporting and Records	AR 385–40
Army Equipment Record Procedures	TM 38–750
Authorized Abbreviations and Brevity Codes	AR 320–50
Dictionary of United States Army Terms	AR 320–5
Military Symbols	FM 21–30

b. Ammunition.

Ammunition, General	TM 9–1900
Care, Handling, Preservation, and Destruction of Ammunition	TM 9–1300–206
Disposal of Supplies and Equipment: Ammunition	AR 755–140–1
Malfunctions Involving Ammunition and Explosives	AR 700–1300–8

c. Inspection and Maintenance.

Cleaning of Ordnance Materiel	TM 9–208–1

d. Training.

Browning Machine Guns, Caliber .30 M1919A6 and M37	FM 23–55

APPENDIX B

BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

B–1. Scope

This appendix lists items which accompany the caliber .30 machine guns, M1919A4 and M1919A6, or are required for installation, operation, or operator's maintenance.

B–2. General

This Basic Issue Items List is divided into the following sections:

a. Basic Issue Items—Section II. A list of items which accompany the machine guns and mounts and are required by the operator/crew for installation, operation, or maintenance.

b. Maintenance and Operating Supplies—Section III. A listing of maintenance and operating supplies required for initial operation.

B–3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items, Section II.

a. Source, Maintenance, and Recoverability Codes (SMR), Column 1.

(1) Source code, indicates the selection status and source for the listed item. Source codes are:

Code	*Explanation*
P----------	Repair parts which are stocked in or supplied from the GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories.
P2---------	Repair parts which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
M----------	Repair parts which are not procured or stocked but are to be manufactured in indicated maintenance levels.

Code	Explanation
A----------	Assemblies which are not procured or stocked as such but are made up of two or more units. Such component units carry individual FSN's and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X----------	Parts and assemblies which are not procured or stocked and the mortality of which is normally below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1---------	Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly or component.
X2---------	Repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.
G----------	Major assemblies that are procured with PEMA funds for initial issue only to be used as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DSU and GSU level or returned to Depot supply level.

(2) Maintenance code, indicates the lowest category of maintenance authorized to install the listed item. The maintenance level codes are:

Code	Explanation
C----------	Crew or operator.

(3) Recoverability code, indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes are:

Code	Explanation
R----------	Repair parts and assemblies which are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.

Code	Explanation
T----------	High dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts are normally repaired or overhauled at depot maintenance activities.
U----------	Repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value reusable casings.
S----------	Repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically repairable they will be evacuated to a depot for evaluation and analysis before final disposition.

No Code Indicated Parts will be considered expendable.

b. Federal Stock Number, Column 2. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description, Column 3. This column indicates the Federal item name and any additional description of the item required. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses.

d. Unit of Measure (U/M), Column 4. A two-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Incorporated in Unit, Column 5. This column indicates the quantity of the item used in the machine gun or mount. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated (e.g. shims, spacers, etc.).

f. Quantity Furnished with Equipment, Column 6. This column indicates the quantity of an item furnished with the equipment.

g. Illustration, Column 7. This column is divided as follows:

(1) *Figure number, column 7a.* Indicates the figure number of the illustration in which the item is shown.

(2) *Item number, column 7b.* Indicates the callout number used to reference the item in the illustration.

B–4. Explanation of Columns in the Tabular List of Maintenance and Operating Supplies—Section III

a. Component Application, Column 1. This column identifies the component application of each maintenance or operating supply item.

b. Federal Stock Number, Column 2. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description, Column 3. This column indicates the item name and brief description.

d. Quantity Required for Initial Operation, Column 4. This column indicates the quantity of each maintenance or operating supply item required for initial operation of the equipment.

e. Quantity Required for 8 Hours Operation, Column 5. This column indicates the estimated quantities required for an average 8 hours of operation.

f. Notes, Column 6. This column indicates informative notes keyed to data appearing in a preceding column.

B–5. Special Information

Identifications of the usable on codes included in column 3 of this appendix are:

Code	*Used on*
No code	M1919A4 and M1919A6.
B	M1919A4.
D	M1919A6.
W	M2.

B–6. Federal Supply Code for Manufacturers

Code	*Manufacturer*
19204	Rock Island Arsenal.
19205	Springfield Armory.

Section II. BASIC ISSUE ITEMS LIST

(1) Source, maintenance, and recoverability code			(2)	(3)	(4)	(5)	(6)	(7)	
								Illustration	
Source	Maintenance	Recoverability	Federal stock No.	Description Reference No. and manufacturers code — Usable on codes	Unit of measurement	Quantity included in unit	Quantity furnished with equipment	Figure No.	Item No.
(a)	(b)	(c)						(a)	(b)
				REPAIR PARTS Machine Guns, M1919A4 and M1919A6					
P	C	------	1005–714–8339	BARREL ASSEMBLY---------- 7148399 (19204) B	ea	1	1	B–1	3
P	C	------	1005–714–8400	BARREL ASSEMBLY---------- 7148400 (19204) D	ea	1	1	B–2	2
				TRIPOD MOUNT, M2 (NONE AUTHORIZED)----	------	------	------	------	----
				TOOLS AND EQUIPMENT Machine Guns, M1919A4 and M1919A6					

Section II. BASIC ISSUE ITEMS LIST—Continued

(1) Source, maintenance, and recoverability code			(2)	(3)	(4)	(5)	(6)	(7) Illustration	
Source	Maintenance	Recoverability	Federal stock No.	Description Reference No. and manufacturers code Usable on codes	Unit of measurement	Quantity included in unit	Quantity furnished with equipment	Figure No.	Item No.
(a)	(b)	(c)						(a)	(b)
P	C	------	1005–550–6573	CASE, SMALL ARMS CLEANING ROD: M1 5506573 (19204)	ea	------	1	B–1 B–2	13 3
P	C	------	1005–555–9696	ENVELOPE: spare parts M1, 4 x 3 5559696 (19205)	ea	------	1	B–1 B–2	5 5
P	C	------	1005–556–4174	BRUSH, CLEANING, SMALL ARMS: bore 5564174 (19204)	ea	------	4	B–1 B–2	10 10
P	C	------	1005–559–3026	COVER: spare barrel 5593026 (19204)	ea	------	1	B–1 B–2	2 1
P	C	------	1005–691–1381	BRUSH, CLEANING, SMALL ARMS: chamber 7790582 (19205)	ea	------	1	B–1 B–2	12 12
P	C	------	1005–694–1662	BUFFER, CLEANING ROD 7268275 (19205)	ea	------	1	B–1 B–2	7 7

P	C	------	1005-726-6109	ROD SECTION, CLEANING, SMALL ARMS------ 7266109 (19205)	ea	------	5	B-1 B-2	6 6
P	C	------	1005-726-6110	SWAB HOLDER SECTION, SMALL ARMS CLEANING ROD. 7266110 (19204)	ea	------	1	B-1 B-2	9 9
P	C	------	1005-793-6761	HANDLE ASSEMBLY: cleaning rod---------- 7266115 (19204)	ea	------	1	B-1 B-2	8 8
P	C	R	1005-839-6662	COVER: M13---------- 11686598 (19205) B	ea	------	1	B-1	1
P	C	------	4933-556-8334	WRENCH, COMBINATION: M6---------- 5568334 (19204)	ea	------	1	B-1 B-2	4 4
P	C	------	4933-652-9950	EXTRACTOR, RUPTURED CARTRIDGE CASE-- 7790352 (19205)	ea	------	1	B-1 B-2	11 11
				TECHNICAL MANUAL, TM 9-1005-212-10--------	ea	------	1	------	----
				TRIPOD MOUNT, M2					
P	C	------	1005-659-1428	COVER, TRIPOD MOUNT---------- 6591428 (19204) W	ea	------	1	B-3	----

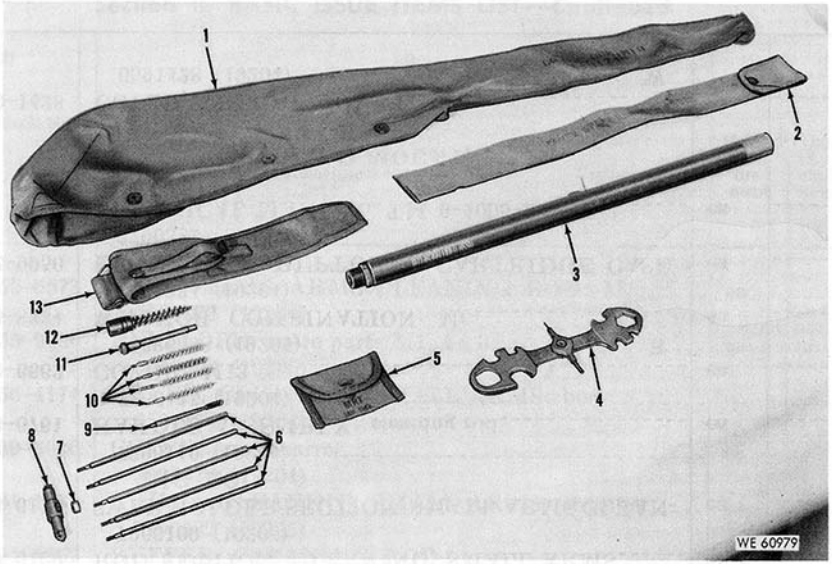


Figure B–1. Basic issue items for Machine Gun, M1919A4.

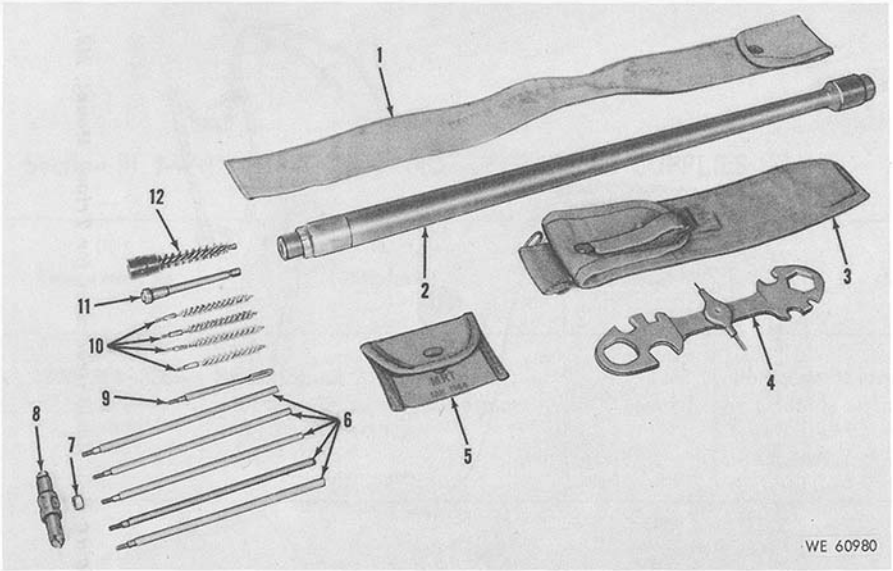


Figure B–2. Basic issue items for Machine Gun, M1919A6.

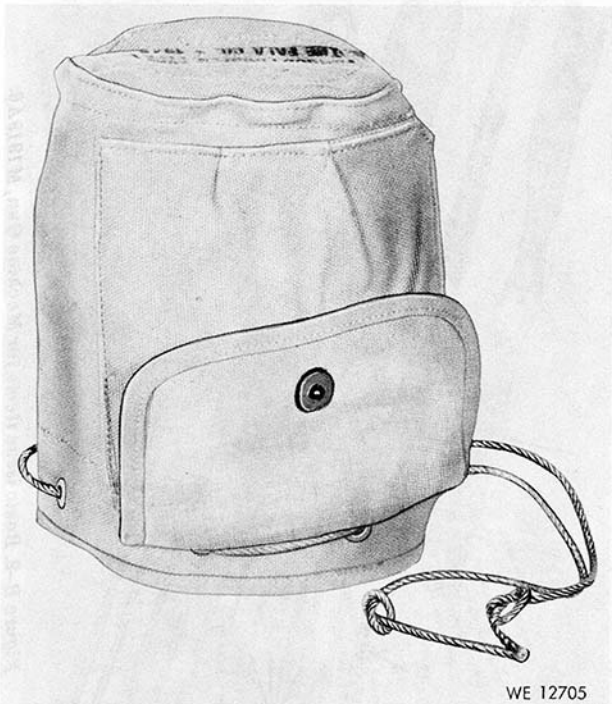


Figure B–3. Basic issue item for Tripod Mount, M2.

Section III. MAINTENANCE AND OPERATING SUPPLIES

(1) Component application	(2) Federal stock No.	(3) Description	(4) Quantity required for initial operation	(5) Notes
Machine guns and mounts---	1005–288–3565	Swab, Small Arms Cleaning: cotton 2½ sq (1,000 in pkg) 5019316 (19204).	(*)	For general cleaning purposes. (Item is authorized for use as required as indicated by the asterisk.)

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12–40 (qty rqr block No. 87) operator and crew maintenance requirements for machine guns, caliber .30, M1919A4 and M1919A6 and Tripod Mount, M2.

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